Ekonomická fakulta
Faculty of Economics
Jihočeská univerzita v Českých Budějovicích
University of South Bohemia in České Budějovice

Jihočeská univerzita v Českých Budějovicích
Ekonomická fakulta
Katedra aplikované matematiky a informatiky

BAKALÁŘSKÁ PRÁCE

Analýza finanční pomoci Afghánistánu

Vypracoval: Ajmal Siddiqui
Vedoucí práce: PhDr. Marek Šulista, Ph.D

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Zásady pro vypracování:

Cílem bakalářské práce je provedení analýzy finanční zahraniční pomoci Afghánistánu, který patří po 30 letech nejrůznějších konfliktů mezi nejchudší země světa a závisí tak na mezinárodní pomoci. Svět zemi věnuje každoročně čtyři miliardy dolarů (téměř 84 miliardy korun) civilní pomoci. Kromě toho Severoatlantická aliance zemi přislíbila 4,1 miliardy dolarů na posílení bezpečnosti.

Metodický postup:

1. Seznámení se s problematikou finanční pomoci Afghánistánu a odbornou literaturou.
2. Akvizice potřebných dat pro provedení analýzy finanční pomoci.
3. Vlastní analytická část - provedení analýzy uskutečněné a plánované finanční pomoci poskytované mezinárodním společenstvím Afghánistánu a struktury alokovaných prostředků pro jednotlivé rozvojové oblasti. Pomocí matematických metod kvantifikovat celkovou sumu finanční pomoci od roku 2000 do roku 2014 a její vliv na hospodářský růst země.
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Vedoucí bakalářské práce:	**PhDr. Marek Šulista, Ph.D.** Katedra jazyků
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doc. Ing. Ladislav Rolínek, Ph.D.
děkan

L.S.

JIHOČESKÁ UNIVERZITA V ČESKÝCH BUDĚJOVICÍCH EKONOMICKÁ FAKULTA Studentská 13 370 05 České Budějovice

prof. RNDr. Pavel Tlustý, CSc.
vedoucí katedry

V Českých Budějovicích dne 28. března 2013

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1 Introduction

Foreign aid has always performed an important role in Afghanistan's history. The first financial aid having been received by Afghanistan from the East India Company during the British Rule in South Asia. We can divide the inflow of foreign aid to Afghanistan in the following three stages.

1. Pre-Cold War (1919-1950s)
2. The Cold War era (1960s-1991)
3. Post 9/11 (2001-present)

In this thesis I will analyze the aid received in the Post 9/11 period (2001-present), which means since the NATO invasion in 2001 until now. Over the previous 13 years, Afghanistan had become one of the world's top receivers of foreign assistance. According to the Afghan government statistics, since 2002 the whole total of pledges for Afghanistan, as of July 2012, stand at USD 119 billion, which consist of USD 16 billion announced in support of development by the Development Partners (DPs) at the Tokyo Ministerial Conference in July 2012 to be allocated over four years through to 2015, and USD 14 billion promised at the Chicago NATO Summit in May 2012 to Support security for the upcoming years. The total disbursed amount reached USD 70 billion in December 2011.

However critics say plans that priorities fast gains and peg assistance to short-term military goals have created little in terms of sustainable results; and instead have left Afghanistan's economy extremely dependent on foreign aid flows that may soon dry up. After 2014 which is called the transition year for Afghanistan, the amount of foreign aid will decrease to the lowest percentages which means that the Afghanistan government should stand on its own feet and support private sector and economic growth, Furthermore, Afghanistan will need to overcome a number of challenges, including low revenue collections, an inability to create jobs, corruption and the need to increase the ability and effectiveness of its government.

A World Bank investigation shows that Afghanistan will face a fiscal gap of USD 4 billion per year. The reason that I have chosen this topic, " Analyses of Financial Aid to Afghanistan" is to analyze the past 13 years of foreign aid and to understand and explain those concepts of foreign aid which were effective or ineffective for the people of Afghanistan.

The thesis is divided into four main parts, which are theoretical background, methodology, practical application and conclusion. In the part theoretical background there will be given general information about geography, people, the political and economic systems, which will help readers to know more about Afghanistan. In part two, methodology there will be a brief explanation of the aims and choices of methodology for this thesis. In part three, practical work, some mathematical analysis will be used and the results analyzed and finally the conclusion will give a summary of the findings, suggest some new ideas, add some recommendations and clarify whether or not the set aims have been attained and, if not, will explain the reasons for this.

I trust this thesis will help to elucidate the exact amount of foreign aid provided to Afghanistan since 2001 until 2012 and the sectors and provinces which were covered by his aid, as well as giving information about the effectiveness or ineffectiveness of foreign aid and relationship of variables of foreign aid with the health, higher education, transportation sectors.

2 Theoretical background

Before I start writing about the theoretical background of my thesis I would like to give a brief information about the geography, people, political system and economical system of Afghanistan.

1.1 Geography

The CIA reported that[1] Afghanistan is a land-locked country in central south Asia and its capital city is Kabul. It covers an area of 652,230 square km, which is slightly smaller than Texas and is ranked as the 41st biggest country in the world in terms of square kilometers. It is surrounded by Pakistan on the east and south, China on the north east, Tajikistan, Turkmenistan and Uzbekistan on the north and Iran on the west.

Afghanistan is a country of mountains and rivers, and its highest point is Noshak a mountain peak of 7,485 meters located in the eastern part of Afghanistan and the lowest point is the 258 meters long Amu river which is located on the boundary with Central Asia.

1.2 People of Afghanistan

The U.S. Department of State reported that[2] the population of Afghanistan is around 30 million inhabitants who are from different ethnic groups Pashtun, Tajik, Hazara, Uzbek and many other ethnic groups all of whom are so-called Afghan. In Afghanistan many languages are spoken among the people of these different ethnic groups, but the official languages are Persian(Dari) and Pashto, which are the most spoken languages in the country. In Afghanistan 99% of the population is Muslim and 1% other religions.

1.3 Political system

Kenneth Katzman book (14 August 2013)[3] says Afghanistan has been colonized by the British Empire as well as many other countries in the region over the centuries. Afghanistan fought the British Empire three times until they left the country. The last war ended on 19 August 1919 after which finally got independence. After freedom the country made a lot of developments and set up a well-organized government, but after the USSR attacks of 1979-1989 and then from 1992 until 1996, Afghanistan faced civil war which damaged lots of the

[1] https://www.cia.gov/library/publications/the-world-factbook/geos/af.html

[2] http://www.state.gov/j/drl/rls/irf/2007/90225.htm

[3] http://www.fas.org/sgp/crs/row/RS21922.pdf

country's economic foundations and transformed Afghanistan to a very poor and unsafe country in the region. After that, in 1996 until 2001 the Taliban regime took over the country which was the worst era for the people of Afghanistan as women were not able to go to school and many people migrated to other countries in Asia, Europe, USA and Australia. After 11/9/2001 the North Atlantic Treaty Organization (NATO) and the U.S army defeated Taliban regime and established a new government which could bring peace, success and delight and almost 90% of the people are satisfied with their activities. The new government was named the Islamic Republic of Afghanistan and made up of three commands executive, legislative and judiciary. For the first time Hamid Karzai was selected as president in the Bonn conference for a three year trail period and after that he was elected through the election process for the first time for a four year period and then for the second time for another four year period and his cabinet includes 25 ministers. The ministers are introduced by the president to the parliament and if they got enough votes from the parliament then they will start to work as a minister. Afghanistan is administratively allocated into 34 provinces and each province has his own governor who is appointed by the president.

1.4 Economic system

A report by Stefanie Nijssen on the economic development in Afghanistan (October 2010)[4] states that, after achieving independence in August 1919 from the British Empire, the Afghan government of that time set up goals to modernize the country's civilization and economy immediately at a really fast pace. From the post-independence government of King Amanullah in the 1920s until the time of King Zahir Shah in the mid-1950s, modernization continued and saw the establishment of the national bank, tight control of economic modernization, a new education system and the industrialization of the country. Then, from 1953 until 1963, the prime minister Mohammad Daoud Khan asked for aid from the United States (US) and the Union of Soviet Socialist Republics (USSR) for military and economic assistance. In the period 1950-1970, the country obtained 50% of its assistance from the United States and 30% from the Union of Soviet Socialist Republics.

We can divide the Afghanistan economy spans into three distinct parts.

[4] https://www.cimicweb.org/cmo/afg/Documents/Economic/Afghanistan_Economic_Brief_History.pdf

1. The Economy of Soviet Union 1978-1989
2. Rise of the war economy 1989-2001
3. Current Economic situation

1.4.1 The Economy of Soviet Union 1978-1989

The Soviet Union had its advantages and disadvantages in the economy of Afghanistan. The advantages were that construction of infrastructures like the Salang Tunnel, which helped the public in traveling from Northern Afghanistan to the capital, paved roads, the building of small settlements. This period also was 25% growth in power output and growth of 7 % GNP in 1978, as well as new economic and educational policies. The government developed towards state capitalism, for example, the banks began to nationalized, state control of private companies and taxes on foreign trade. Then the disadvantages of USSR aid began to show itself such as a decrease in the GDP, the halting of US aid and the people became dissatisfied with the state and so on.

1.4.2 Rise of the war economy 1989-2001

For writing this topic I have used information from BARNETT R. RUBIN's book (World Development, Volume 28, Issue 10, October 2000, Pages 1789-1803)[5] After the breaking down of the USSR in February 1989, both Soviet and western assistance declined and by 1991, after the disbanding of the USSR, foreign assistance stopped and give chance to regional powers mainly Pakistan, Iran and Russia to support the local commanders in Afghanistan which was the start of the war economy. After that, the religious leaders of Pakistan, Saudi Arabia and Afghanistan with financial support from the CIA (Central Intelligence Agency) and ISA (Inter-Services Intelligence) of Pakistan, created the Taliban group, which means student in the Arabic language. Within four years, the Taliban regime took control over the country's roads, cities, airports and customs posts. They set up a move from localized greedy warlordism to a frail government based on a criminalized open economy. The criminalized open economy was financed by money from opium and arms dealing, which affected Afghanistan and other countries in the region and Afghanistan became the world's leading opium manufacturer and a Centre for arms dealing maintaining a

[5] http://www.sciencedirect.com/science/article/pii/S0305750X00000541

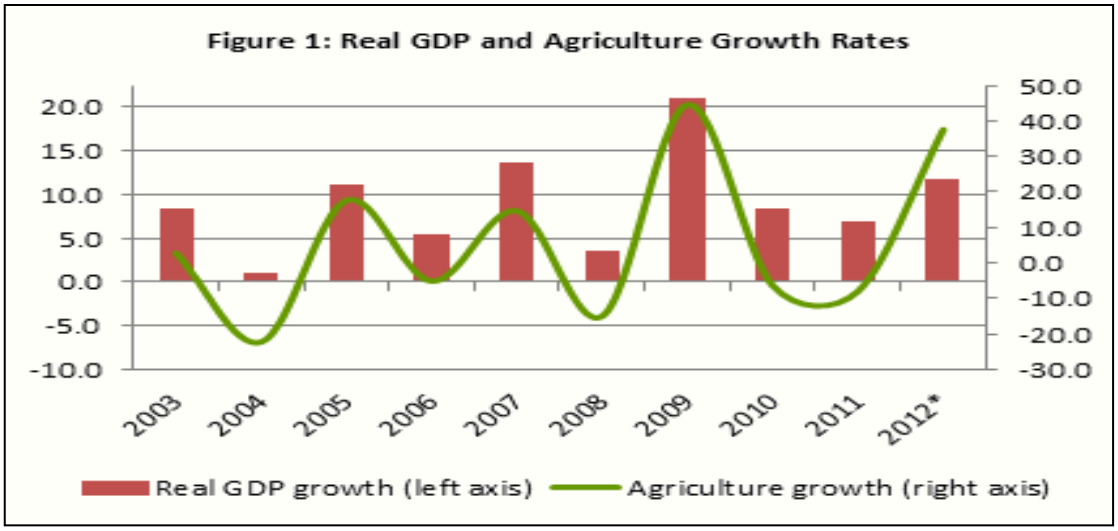
multibillion dollar trade in goods smuggled from Dubai to Pakistan. These actions have changed social relations, damaged the country and the legal economy all around the region.

1.4.3 Current Economic Situation

For writing this topic I have used information from Claudia Nassif and Omar Joya's report Afghanistan Economic Update, The World Bank (April 2013)[6] Since the collapse of the Taliban regime and the invasion of NATO and the U.S army in 2001, the Afghanistan economy has started to develop and the reason for this growth is Foreign Aid. Now to look at information in detail about the current economic situation. **Afghanistan is in a state of transition.** In mid-2010, NATO and the Afghan government agreed a transition period during which time full responsibility for security would be handed over to the Afghan National Army (ANA) and National Police by the end of 2014. After the withdrawal of international military forces from Afghanistan, it is expected that it will slow the rate of growth and have a long-term impact on the country's economic and development cycle. While the foreign aid and support of international partners will continue until 2016.

1.4.4 Recent Economic Developments

With one year left in the transition period, Afghanistan's economy continues to grow, which we can see in the chart (Figure 1).



Sources: CSO and Ministry of Agriculture, Irrigation and Livestock

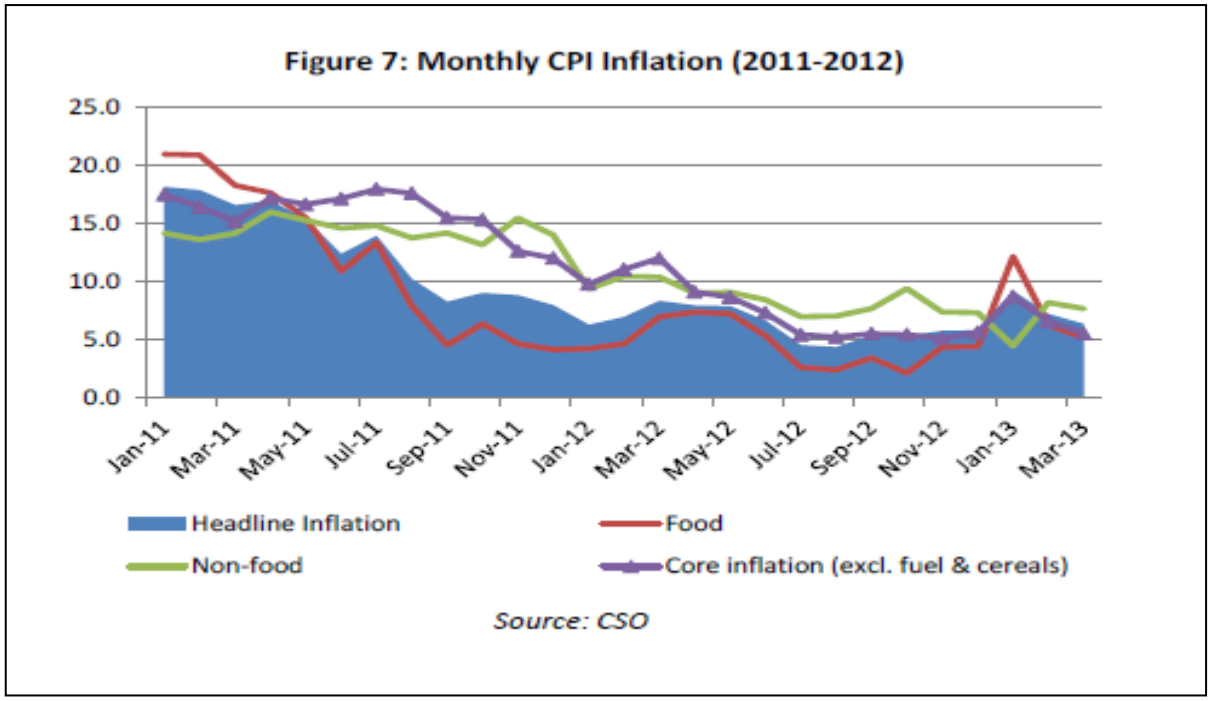
6 http://reliefweb.int/sites/reliefweb.int/files/resources/Afghanistan%20Economic%20Update,%20April%202013.pdf

1.4.5 Real GDP

Real GDP improved from 7.3 percent in 2011 to an expected 11.8 percent in 2012, the reasons for the increase were favorable weather conditions and extraordinary harvest. Wheat accounts contain around 60 percent of agricultural output and is the most essential valid harvest in the country which gives economic growth and tends to increase in the agricultural output (Figure 1).

1.4.6CPI inflation

CPI inflation fell from 10.2 percent in 2011 to 6.4 percent in 2012. Drops in both food and non-food prices were below the rates of the decrease in inflation. Core inflation –CPI not including petroleum and cereals- decreased from 14.6 percent in 2011 to 6.4 percent in 2012. Core inflation advanced in 2011 matched to the peak line, and was mostly due to a sharper drop in the rates of fuels and cereals in that year (Box 1).



1.4.7 Other Economic Updates

Information the index mundi has been used for economic updates[7], which are place in the following [Table 1].

[7] http://www.indexmundi.com/afghanistan/economy_profile.html

GDP (purchasing power parity)	$34.29 billion (2012 est.)
GDP - per capita (PPP)	$1,100 (2012 est.)
Unemployment rate	35% (2008 est.)
Budget revenues	$2.249 billion
Expenditures:	$3.974 billion (2012 est.)

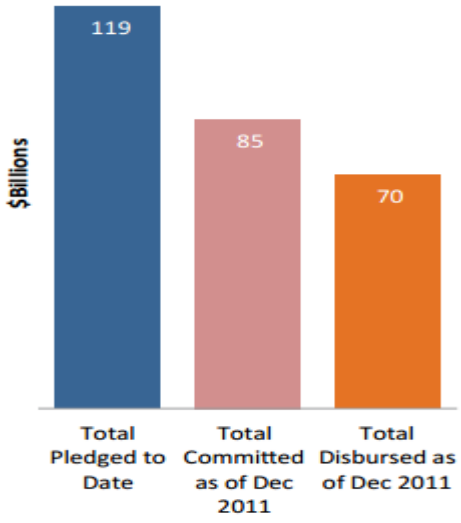
Source: Self worked

1.5 Foreign Aid

1.5.1 Overview of Foreign Aid

The Development Cooperation Report 2012, Ministry of Finance, Afghanistan[8] says that since 2002 until July 2012 the total amount of foreign aid for Afghanistan stand at 119 billion US dollars, which contains the foreign assistance announced in the Tokyo Ministerial Conference in July 2012 to support development and Chicago NATO Summit in May 2012 to support security. As [Figure 2] shows,

Figure 1: Overview of External Assistance

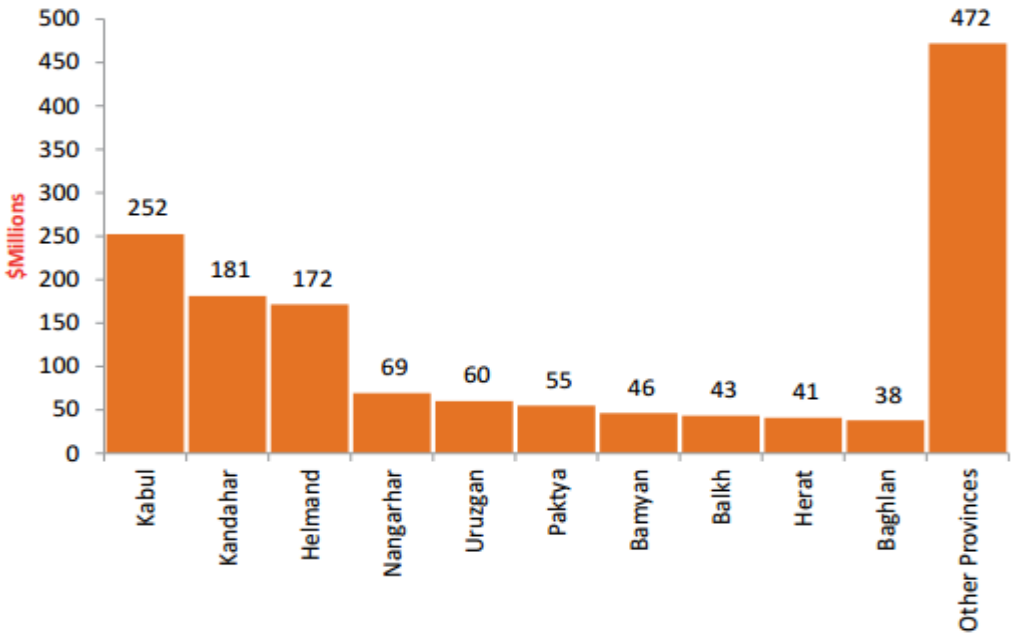


Source: Ministry of Finance

[8] http://mof.gov.af/Content/files/DCR%20-%202012%20(English).pdf

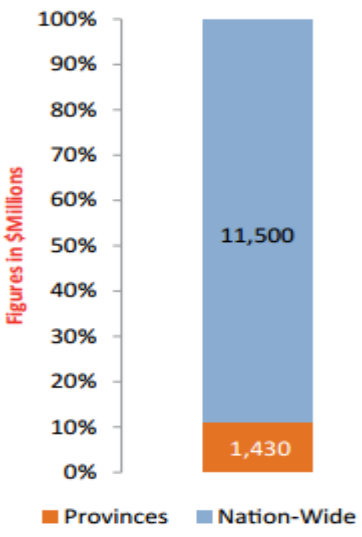
Gathering geographical data of foreign aid has always been a challenge for the Ministry of Finance (MoF). From the 12.93 billion US dollars of foreign aid, disbursed in 2011, 11.5 billion US dollars has been reported to have had a "nation-wide" effect, while the remaining 1.43 billion US dollars has gone to particular provinces. [Figure 3] shows the amounts for the 10 provinces that obtained the maximum amount of foreign aid in the year 2011 and the remaining amount of 1.43 billion US dollars went to other provinces, which is shown in the last column together because of not have exact amount per each province.

Figure2: Provincial Distribution of Foreign Aid



Source: Ministry of Finance

The 11.5 billion US dollars which had nation-wide impact has been spent on different national projects, like spending through military means, such as the Commanders Emergency Response Program (CERP), the Afghanistan Security Force Fund (ASFF) and Provincial Reconstruction Teams (PRTs), which accounts for almost 90% of foreign aid disbursed in 2011.



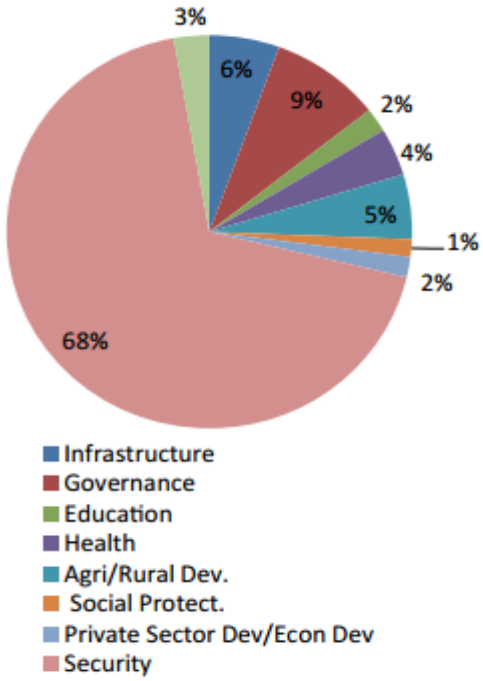
1.5.2 Sectorial Distribution of Foreign Aid

Since 2002 until now, security has always been a challenge

for the government of Afghanistan (GoA) and more than 50% of foreign aid has been spent in the security sector with the remainder of foreign aid being spent on Infrastructure, Governance, Education, Health, Social Protection, Private Sector Development/Economic Development and Agriculture/Rural Development. The government of Afghanistan believes that a safe environment is helpful for sustainable growth and will bring peace in Afghanistan. After the creation of the Afghan National Army (ANA) and the Afghan National Police (ANP), security of the Afghan residents has been high on the schedule of the (GoA) and the Development Partners. An analysis of statistics from (2001-2010) shows that, on average, 51% of aid money has been financed into the security sector. Therefore, it is no surprise to see that a large amount (68%) of foreign aid was assigned to investment in security expenses. See [Figure 4]

The analysis shows that the USA offered the maximum amount of foreign aid in support of security (95%) in 2011, followed by Japan (3%), European Union (1%), whilst the other 1% came from the Development Partners. For more information see [Table 2]

Figure 3: Security versus Development (2011)



Source: Ministry of Finance

Table 2: SECTORIAL INVESTMENT OF FOREIGN AID (2011) – ($ Millions)

Rank	Development Partner	Total commitment	Total Disbursed
1	United States	13,027	10,406
2	Japan	670	670
3	Germany	305	216
4	World Bank	241	152
5	United Kingdom	352	357
6	Australia	209	150
7	European Union	194	221
8	Asian Dev. Bank	131	123
9	Canada	116	116
10	Sweden	101	101
11	Other DPs	523	418
Total		**15,869**	**12,930**

Source: Self made

Table 2 sums up the sectorial investment of foreign aid, which contains the Infrastructure, Governance, Education, Health, Agriculture, Security and Private Sector. The maximum amount of foreign aid used in Security in 2011, followed by governance, infrastructure and so on. In the last row of table 2, the amount of foreign aid which was offered by the other 14 Development partners (DPs) is summed up .

1.5.3 Donors and Amounts of Foreign Aid

From 2002 until December 2011, the United States of America[9] has been the first country in terms of providing aid, giving the highest amount of foreign aid to Afghanistan almost 67% , followed by Japan, the European Union and other Development partners. For more detail see [Table 3]

[9] http://mof.gov.af/Content/files/Development%20Cooperation%20Report%202010.pdf

Table 3: Total Commitments as of December 2011 – ($Millions)

Rank	Donor	(2002-2011) Commitment	(2002-2011) Disbursement
1	United States	57,383	47,524
2	Japan	3,821	3,821
3	European Union	3,077	2,816
4	United Kingdom	2,574	2,578
5	Germany	2,435	978
6	Asian Dev. Bank	2,400	1,129
7	World Bank	2,378	1,852
8	India	1,588	759
9	Canada	1,371	1,371
10	Netherlands	1,109	1,110
11	Other Donors	6,982	5,785
Total		**85,118**	**69,723**

Source: Self made

In Table 3 you can see the total amount of 85 billion US dollars which was promised from 2002 until 2011 and during this period they disbursed 69.7 billion US dollars. The 11th row shows the 35 other donors.

1.5.4 Foreign Aid Management Policy

Aid Management Policy 2013, Ministry of Finance, Afghanistan[10] states, The policy is established based on the regulation-making authority of agencies of the Islamic Republic of Afghanistan as set out in Article 76 of the Constitution of the Islamic Republic of Afghanistan. This policy is made up of 26 detailed policies in 7 ordered thematic parts to

[10] www.mof.gov.af

report the issues and conflicts related to foreign aid in Afghanistan. These prioritized thematic areas are: 1) Afghan-led Development, 2) Capacity Development, 3) Alignment and Use of government Systems, 4) Coordination and Harmonization, 5) Accountability for Results, 6) Transition Issues, and 7) Sustainability of Development.

This Aid Management Policy's (AMP)[11] objectives are to maintain and speed up the accomplishment of Afghanistan's vision to move on the way towards achieving self-reliance by 2025; an assurance made at the international conference on Afghanistan in Bonn in December 2011. This Policy outlines the declining amount of international troops in Afghanistan and the leaving strategy of NATO-ISAF after 2014 also addresses the reduction in foreign aid commitments after 2014. The policy also reports about the key issues of fiscal management, government capacity and development partnerships. This foreign aid management policy will support the renewed stronger basis for working together to support sustainable progress and the development of Afghanistan during the Transformation Span (2015-2024). This Aid Management Policy (AMP) applies to all development partners and aid donors of Afghanistan. Its polices also apply to all government ministries and sectors at both national and regional levels which includes NGOs and private organizations.

1.5.5 Goals

The main aims of this policy are to:

1. Improve the adequacy of collaboration in terms of advancement through greater government ownership and leadership.
2. Build up economic supervision by expanding streams of development aid through the budget.
3. Organize off-budget streams.
4. Operationalize commitments of assistance viability within the Tokyo framework through a procedure of common responsibility.

11 https://www.cimicweb.org/cmo/Afghanistan/Crisis%20Documents/Humanitarian%20Assistance/HA%20Actors%20in%20Afghanistan/09%20Donors%20and%20Aid/IMPROVING%20AID%20EFFECTIVENESS%20FOR%20REDUCING%20POVERTY.pdf

5. Increment transparency and responsibility inside the Government, between the foreign aid providers and the Government and the residents of Afghanistan in the administration of improvement participation.

1.5.6 Macro-economic Background of Foreign Aid in Afghanistan

For writing about this topic I will use information from the website of the Ministry of Finance of Afghanistan[12] which reported that, Since, 2002 practically the whole Development Budget of Afghanistan was covered by external assistance and, on average, around 52% of the operating Budget of Afghanistan has been covered by external assistance. As was mentioned in previous topics, from the total of USD 90 billion foreign aid, which was promised in the period (2002-2013), USD 57 billion of them was disbursed in the period (2002-2010). The help to the degree of **GDP** (Gross Domestic products) ,that once stood at 100%, right now stands at 71%. Local incomes account for about 11% of GDP. 82% of the foreign aid paid from 2002-2010 was used outside government frameworks, of which a huge percentage (51%) was given to security sector investments. The remaining 49% has covered development spending for all additional areas.

[12] www.budget.mof.gov.af

3 Methodology

3.1 Aims and Methods

My aim is to show relationships among variables and dependence of Foreign Aid at the National level and Provinces level which will show at the end of the analysis whether or not the foreign aid was helped the public to increase their general living standards. For doing that i used hypothesis, Foreign Aid helped the Afghanistan economy to achieve sustainable growth in the period 2002 until 2011 and that this had the effect increasing living standards for the general public during this time.

The methodology used in this bachelor thesis paper is a quantitative research method. For this purpose, Primary and secondary data sources and data from the Ministry of Finance of Afghanistan, World Bank, Research Journals, Ministry of Higher Education, reports and documents related to international aid, Statistics data of Afghanistan government and from Economics books were used. The data for statistical analysis due to inconsistencies was very hard to collect because of 3 decades civil war the statistic records were burned or has been stolen. Evaluation of the data was done using statistical regression analysis and normality test. The data analysis was done using STATISTICA software because of its easy and user friendliness. Analyzing the data was a difficult task initially but was made possible because of consultations held with experts for assistance. The Regression analysis method I used to evaluate the relationships among variables and dependence of Foreign Aid on the Number of Doctors in public hospitals, Number of private universities, Number of public universities and Amount of transportation aid in the 10 highest foreign aid receiver provinces in Afghanistan. The period under review is from 2002 until 2011 and it supposes to end at 2014. The reason for choosing 2014 is that the Foreign Aid will be decreased and Afghanistan will be on its own way for its economic and security transition. The period set for this transition is from 2014 until 2024. Analysis will be made of the data from the private sector, which includes the health sector, the transport sector and the higher education sector.

3.2 Regression Analysis

In statistics, Regression[13] analysis is a statistical method for modeling and investigating the relationships among an outcome or response variable and one or more forecaster or regressor variables. The final outcome of a regression analysis study is frequently to produce model that can be utilized to estimate or anticipate future values of the response variable given identified values of the predictor variables. More specifically, regression analysis serves to recognize how the typical value of the criterion variable changes when any one of the independent variables is differed, while the other independent variables are held stable. Most regularly, regression analysis approximates the contingent desire of the dependent variable given the independent variables – that is, the average value of the dependent variable when the independent variables are fixed. Less commonly, the focus is on a quantile, or other location parameter of the conditional distribution of the dependent variable given the independent variables. In all cases, the estimation target is a function of the independent variables called the regression function. In regression analysis, it is also of interest to characterize the variation of the dependent variable around the regression function which can be described by a probability distribution. Regression[14] analysis is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. Many types of regression analysis have been developed. Familiar methods such as linear regression which includes (simple and multiple linear regression) and ordinary least squares regression are parametric, in that the regression function is defined in terms of a finite number of unknown parameters that are estimated from the data. Nonparametric regression refers to techniques that allow the regression function to lie in a specified set of functions, which may be infinite-dimensional. The simple linear regression model involves a single predictor variable and is written as:

$$y = \beta_0 + \beta_1 . x + \varepsilon$$

Where y is the response, x is the predictor variable, β_0 and β_1 are unknown parameters, and ε is an error term. The model parameters or regression coefficients β_0 and β_1 have a physical interpretation as the intercept and slope of a straight line, respectively. The slope β_1 measures the change in the mean of the response variable y for a unite change in the predictor variable

[13] Introduction to Time Series Analysis and Forecasting by Douglas C. Montgamery, Cheryl L. Jennings, and Murat Kulahci, 2008, Pg 73-135.

[14] http://www.law.uchicago.edu/files/files/20.Sykes_.Regression.pdf

x. Regression models often include more than one predictor or regressor variable. If there are k predictors, the multiple linear regression model is:

$$y = \beta_0 + \beta_1 . x_1 + \beta_2 . x_2 + \cdots + \beta_k . x_k + \varepsilon$$

The parameters $\beta_0, \beta_1, \cdots, \beta_k$ in this model are often called partial regression coefficients because they convey information about the effect on (y) of the predictor that they multiply given that all of the other predictors in the model do not change.

4 Practical Part

In the practical part of my thesis, which is actually the main focus of the work, first I will analyze data in STATISTICA software. For doing this I used the following data, Foreign Aid from 2002 until 2010, Number of Doctors in public hospitals from 2002 until 2010, Number of Private and Public universities from 2002 until 2012 and Amount of Transportation aid from 2002 until 2007. The data are from the top 10 provinces which received the highest amount of foreign aid. After finishing the analysis I will interpret the data and use it to present my final results.

[Table 4]: Data for Analysis

	1 Provinces	2 Aid 2002-2010 in Millions	3 No.Doc 2002-2010	4 Trans.2002-2007 in Millions	5 No.Pub.Uni 2002-2012	6 No.Pri.Uni 2002-2012
1	Kabul	2808	2298	31	8	30
2	Helmand	1409	71	3.31	1	2
3	Kandahar	1132	206	11.35	1	5
4	Nangarhar	1051	374	11.94	1	6
5	Heart	629	321	0.19	1	5
6	Kunar	494	85	20.56	1	1
7	Ghazni	472	144	15.25	1	1
8	Pakitka	432	87	3.15	0	0
9	Paktya	420	120	45.67	1	1
10	Balkh	411	392	0.09	1	6

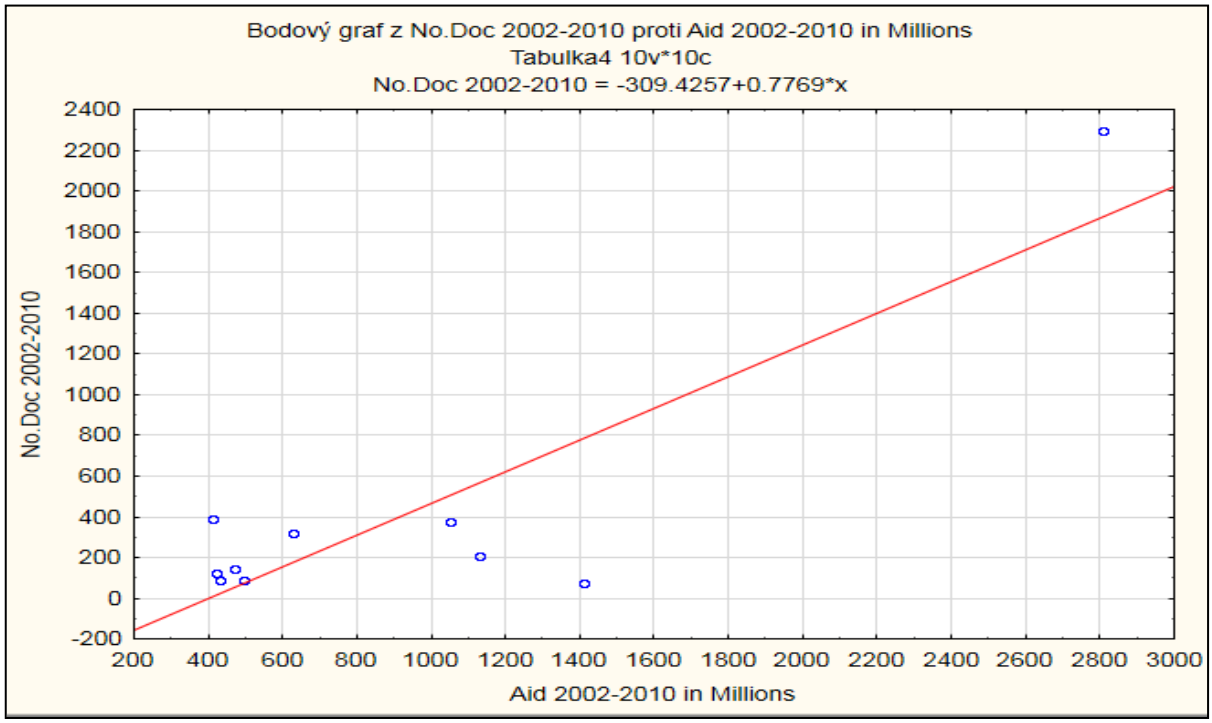
Source: Self worked

4.1 Analysis Steps

Regression analysis was used for doing this. First, it was necessary to identify the dependent and independent *variables*. The dependent *variables* are the Number of Doctors in public

hospitals, Number of Private and Public universities, Amount of Transportation aid and the independent *variable* is Foreign aid. In the first step 2D graphs were produced by using simple linear regression dot graphs. In the graphs the 'X' axis is independent and 'Y' axis is dependent for each *variables*.

Graph 1: Number of Doctors with Foreign aid



Source: Self worked

In Graph 1 'X' axis is the independent *variable* which we can control, change and manipulate and the 'Y' axis is the dependent *variable* which is the outcome and, as we can see from the graph, our linear regression equation is Y= -309.4257+0.7769 X .The 'Y' is the actual value of the Number of Doctors, 'b0' is the intercept of 'Y', 'b1' is the slope of the curve which is positive and it means that our relationship is positive and 'ε' is the error which is the difference between the actual value and the estimated value. For calculating the 'R^2' value the method of least squares is used. The actual values are used from which is determined the mean or average of these values. Next we look at the distances from actual value to the mean and then draw the regression line to come up with the estimated values. After that the distances from the estimated values to the mean are taken and are then compared with the distance from the actual value to the mean and, in this way, we come up with the 'R^2'. However, as we are calculating in STATISTICA we can skip all those calculation because

STATISTICA software calculates it automatically. Here in [Table 5] we can see the result of 'R²'.

[Table 5]: 'R²' value and result of the regression

Statist.	Statistické shrnutí;ZP: No.Doc 2002-2010 (Tabulka4) Hodnota
Vícenás. R	0.865186084
Vícenás. R²	0.74854696
Upravené R²	0.71711533
F(1,8)	23.8150856
p	0.00122424937
Sm. chyba odhadu	358.784184

Výsledky regrese se závislou promennou : No.Doc 2002-2010 (Tabulka4)
R= .86518608 R²= .74854696 Upravené R²= .71711533
F(1,8)=23.815 p<.00122 Smerod. chyba odhadu : 358.78

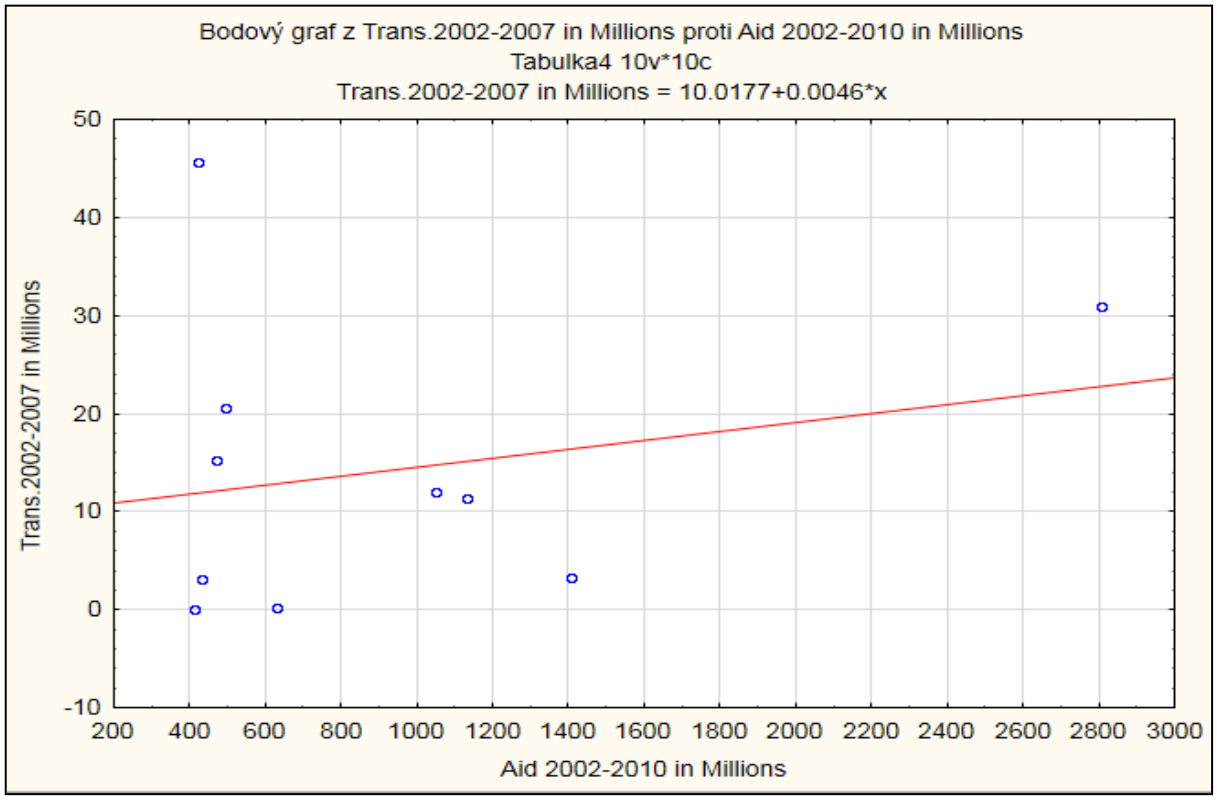
N=10	b*	Sm.chyba z b*	b	Sm.chyba z b	t(8)	p-hodn.
Abs.clen			-309.426	185.9934	-1.66364	0.134754
Aid 2002-2010 in Millions	0.865186	0.177290	0.777	0.1592	4.88007	0.001224

Source: Self worked

As can be seen from the [Table 5] the 'R²' value is 0.74854696 which is a significant result. R= 0.86518684 and if we round up the value of 'R' to the nearest whole number it will be 1, which shows that there is a strong relationship between the Number of Doctors and Foreign aid. On the other hand, if it was closer to zero it would mean that there is no relationship at all between them. The p-value is ($p<0.00122$) which should always be smaller than (0.05) and the error of estimates are (358.78) and F(1,8) is 23.815. In graph 2 can be seen the relationship between Foreign aid and the Amount of Transportation money.

In graph 2, the 'X' axis is Foreign aid, which is independent and the 'Y' axis is the Amount of Transportation money, which is the dependent *variable*. The linear equation is Y= 10.0177+0.0046 X . The Linear equation shows that the relationship between Foreign aid and the Amount of Transportation money is positive. For the value of the least square method or 'R²' see [Table 6].

Graph 2: Amount of Transportation money within the Foreign aid



Source: Self worked

[Table 6]: 'R²' value and result of the regression

Statist.	Statistické shrnutí;ZP: Trans.2002-2007 in Millions (Tabulka4) Hodnota
Vícenás. R	0.232576398
Vícenás. R²	0.0540917808
Upravené R²	-0.0641467466
F(1,8)	0.457480163
p	0.517877281
Sm. chyba odhadu	15.2365465

Výsledky regrese se závislou promennou : Trans.2002-2007 in Millions (Tabulka4)
R= .23257640 R²= .05409178 Upravené R²= -----
F(1,8)=.45748 p<.51788 Smerod. chyba odhadu : 15.237

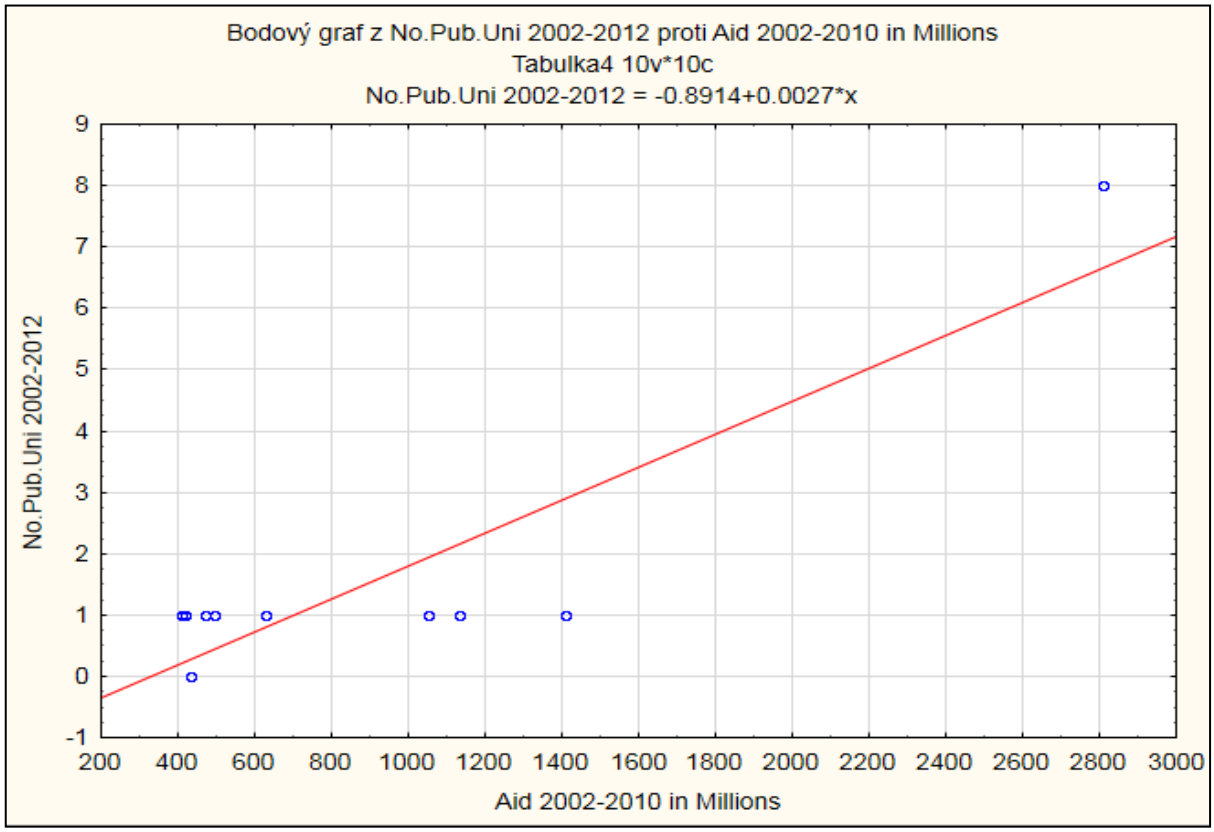
N=10	b*	Sm.chyba z b*	b	Sm.chyba z b	t(8)	p-hodn.
Abs.clen			10.01771	7.898611	1.268287	0.240357
Aid 2002-2010 in Millions	0.232576	0.343858	0.00457	0.006760	0.676373	0.517877

Source: Self worked

It can be seen in [Table 6] that the 'R²' value is not so good because if rounded up it will approach zero, which means that the relationship between the amount of Transport money and Foreign Aid is not so good or it has a weak relationship and we can see the error of

estimates value is (15.237) and p-value is (p<0.51788), which, also, is not good because the p-value should always smaller than (0.05).

Graph 3: Public universities with Foreign aid



Source: Self worked

In graph 3, can be found out the relationship between Public universities and Foreign aid. In the case, Public universities is the dependent *variable* and Foreign aid is the independent *variable*. The linear regression equation is Y= -0.8914+0.0027 X and it can be seen from the sign of 'b1' or graph 3 that the relationship is positive between them. After producing the graph it is necessary to calculate the 'R^2' value, p-value and the error of estimates value which can be seen in the [Table 7]. The 'R^2' value is 0.79276702 and, if we round it up, it will approach the number '1', which is a significant result and shows that there is a strong relationship between Public universities and Foreign aid. The p- value is (p<0.00055), which illustrates it is smaller than (0.05). see [Table 7].

[Table 7]: 'R²' value and result of the regression

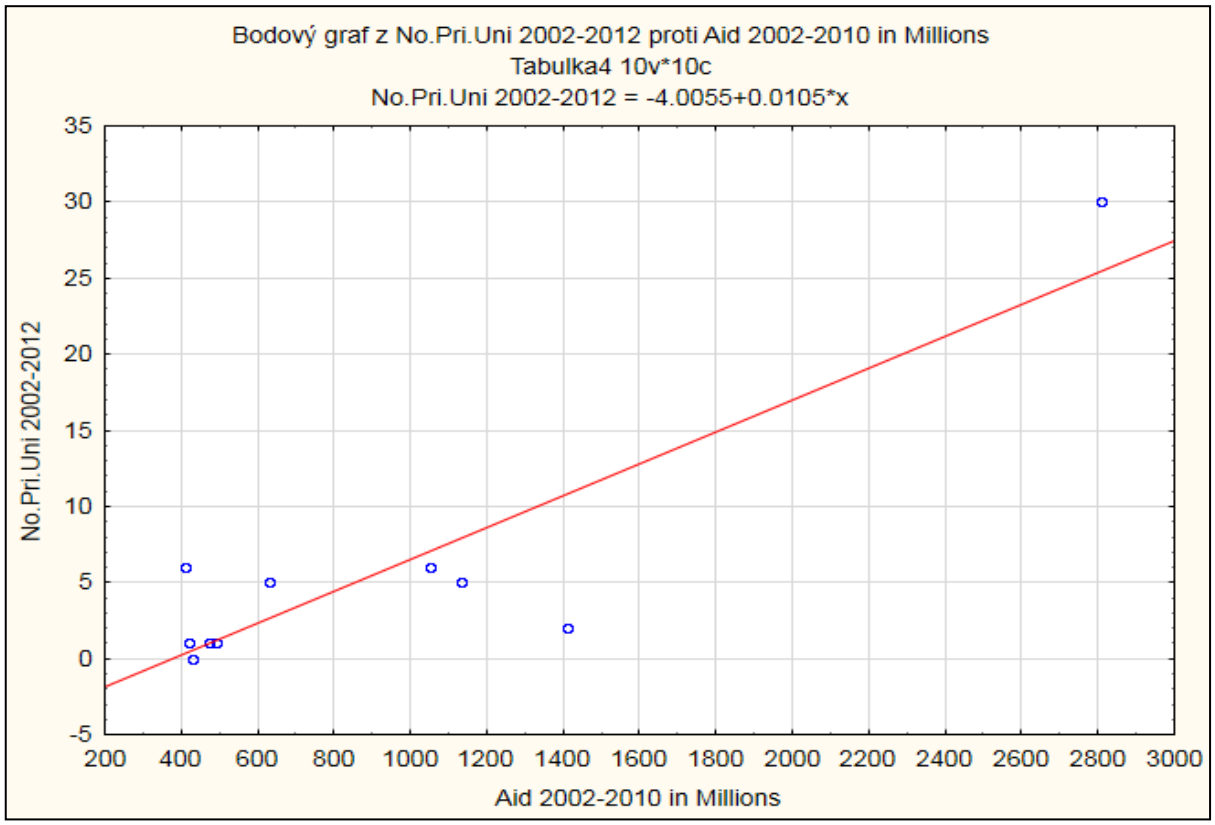
Statist.	Statistické shrnutí;ZP: No.Pub.Uni 2002-2012 (Tabulka4) Hodnota
Vícenás. R	0.890374652
Vícenás. R²	0.79276702
Upravené R²	0.766862898
F(1,8)	30.6038941
p	0.000552477373
Sm. chyba odhadu	1.09633539

Výsledky regrese se závislou promennou : No.Pub.Uni 2002-2012 (Tabulka4)
R= .89037465 R²= .79276702 Upravené R²= .76686290
F(1,8)=30.604 p<.00055 Smerod. chyba odhadu : 1.0963

N=10	b*	Sm.chyba z b*	b	Sm.chyba z b	t(8)	p-hodn.
Abs.clen			-0.891367	0.568339	-1.56837	0.155432
Aid 2002-2010 in Millions	0.890375	0.160948	0.002691	0.000486	5.53208	0.000552

Source: Self worked

Graph 4: Private universities with Foreign aid



Source: Self worked

In graph 4, we demonstrated the relationship between Private universities and Foreign aid, in which Private universities is a dependent *variable* and Foreign aid is an independent *variable* and as seen in the graph, the relationship is positive between them and the linear regression equation is:

$$Y= -4.0055+0.0105X$$

Now the simple regression can be calculated and the least square method which will show the 'R²' value, p- value and the error of estimates which is shown in [Table 7].

[Table 8]: 'R²' value and result of the regression

Statist.	Statistické shrnutí;ZP: No.Pri.Uni 2002-2012 Hodnota
Vícenás. R	0.890418925
Vícenás. R²	0.792845862
Upravené R²	0.766951595
F(1,8)	30.6185866
p	0.000551615842
Sm. chyba odhadu	4.26991259

N=10	Výsledky regrese se závislou promennou : No.Pri.Uni 2002-2012 (Tabulka4) R= .89041893 R²= .79284586 Upravené R²= .76695160 F(1,8)=30.619 p<.00055 Smerod. chyba odhadu : 4.2699					
	b*	Sm.chyba z b*	b	Sm.chyba z b	t(8)	p-hodn.
Abs.clen			-4.00549	2.213518	-1.80956	0.107964
Aid 2002-2010 in Millions	0.890419	0.160917	0.01048	0.001895	5.53341	0.000552

Source: Self worked

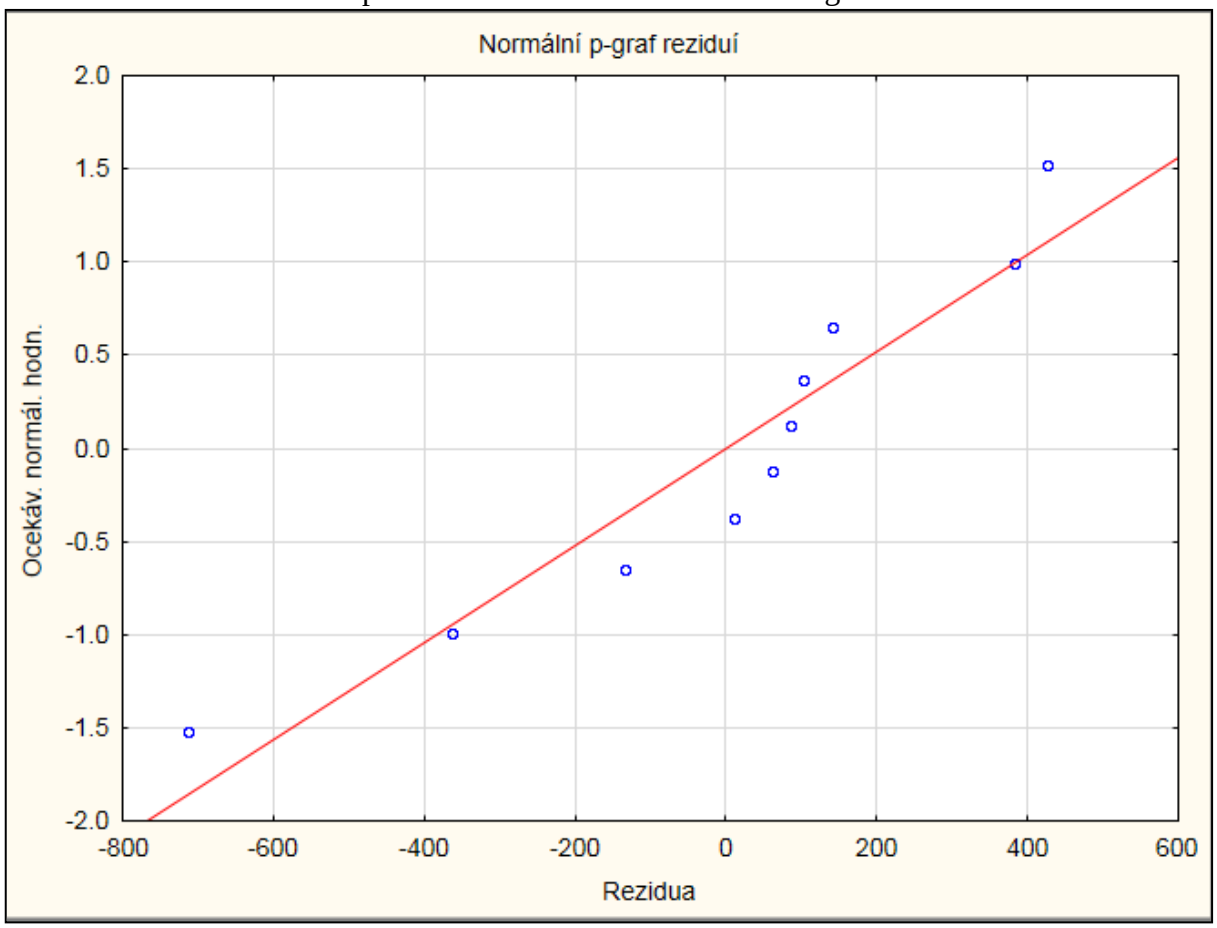
It can be seen in [Table 8] that the 'R²' value is 0.792845862 if we round it up. It will approach the number '1', which shows a strong relationship between Private universities and Foreign aid. Similarly, the p- value is ($p<0.000551615842$) which is smaller than (0.05).

4.2 Normality tests

In statistics, normality tests are used to define if a package of data is well-modelled by a normal distribution and to calculate how possible it is for a random variable underlying the data set to be normally distributed. More specifically, the tests are a form of model selection, and can be interpreted several ways, depending on one's analyses of probability. In this case, we check the normality test graphically for the data provided for this thesis. The data are

Foreign Aid, Number of public and private universities, Number of Doctors in public hospitals and Amount of Transportation aid.

Graph 5: Number of Doctors with Foreign aid

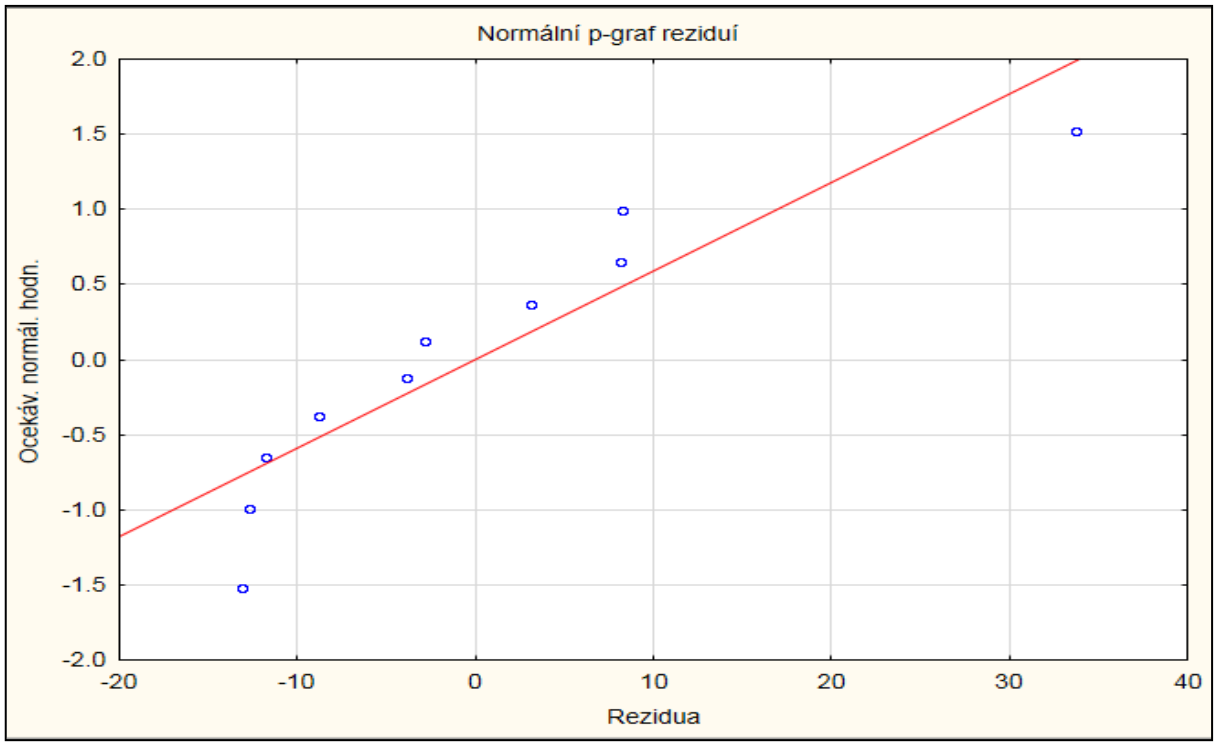


Source: Self worked

In graph 5, we demonstrated Normality test p-graph, which illustrates that the residuals are approximately normally distributed and, therefore, that the correlation is positive and the model has sense.

In graph 6, it can be seen that the residuals are not approximately normally distributed, which means that the model doesn't have sense. We illustrated, also, in the simple regression that the p-value was smaller than (0.05) and the 'R' value was also near to zero. This means the relationship was also weak between them and, so we can clearly say that the Amount of Transportation money and Foreign Aid doesn't have a strong relationship and the model doesn't have sense as can be seen in graph 6 below:

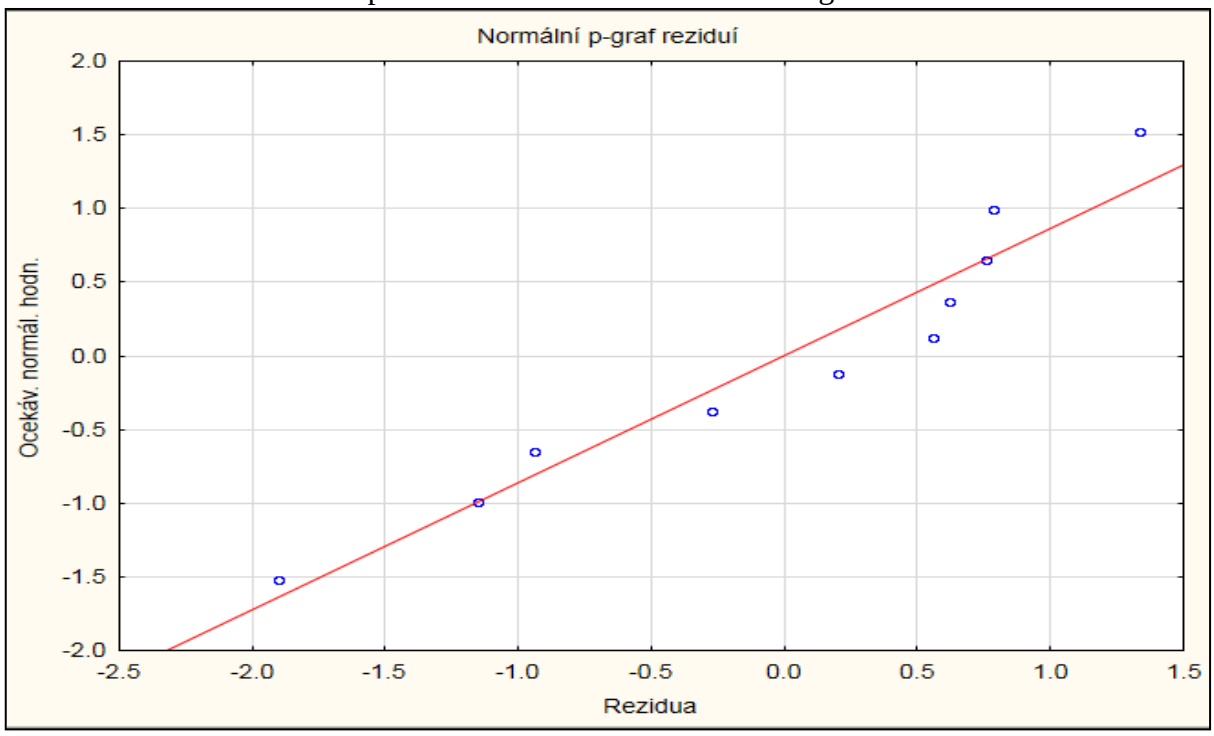
Graph 6: Amount of Transportation money with Foreign aid



Source: Self worked

In graph 7, we can see that the residuals are approximately normally distributed which means that the correlation is positive and the model have sense.

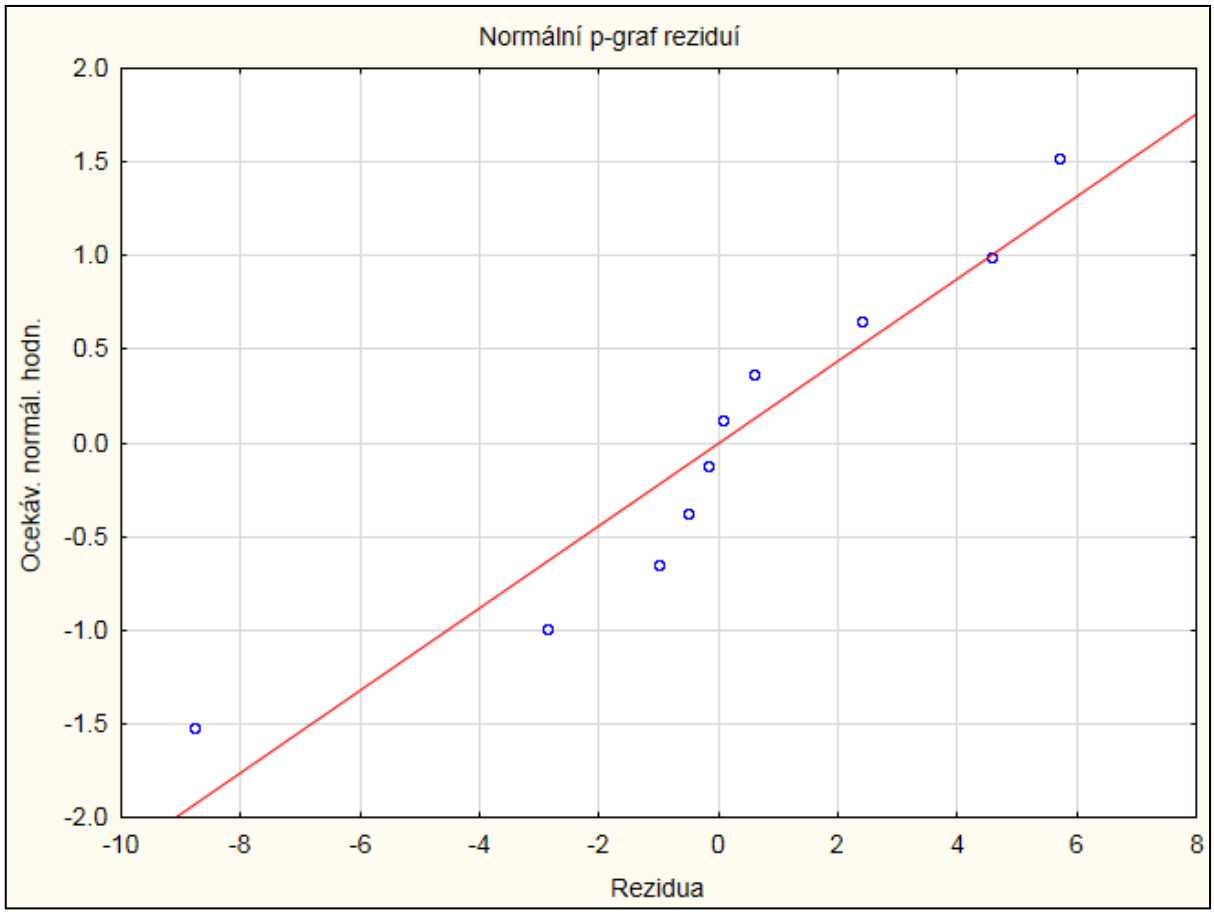
Graph 7: Public universities with Foreign aid



Source: Self worked

In graph 8, can be found that the residuals are approximately normally distributed which means that the correlation is positive and the model have sense.

Graph 8: Private Universities with Foreign aid



Source: Self worked

From the graphs shown above we can say that the residuals are approximately normally distributed and the models have sense and that the relationships between them are positive and that the p-value is smaller than (0.05). The only graph which doesn't make sense is the Amount of transportation money with Foreign aid and which we will describe in the analysis discussion of models.

4.3 Analysis Discussion of Models

In this part of my thesis, firstly, I will discuss about the Number of Public and Private universities verses Foreign aid and describe why it has sense. Then I will talk about the Amount of Transportation money verses Foreign aid and, in the last part, I will consider the Number of Doctors in public hospitals.

4.3.1 Number of Public and Private universities verses Foreign aid

For writing this topic, information from a report of Higher Education in Afghanistan[15] was used, 'An Emerging Mountain Scape, 2013'. This says that since 2002 until now higher education and rising human capital are one of the top three main concerns relating to the country's economic and social development in the Afghanistan National Development Strategy (ANDS).

[Table 9]: Higher Education data in 2002

Year 2002		
Number of Universities	Governmental	16
	Private	0
	Total	16
Number of Students	Male	22683
	Female	0
	Total:	22683
Number of Lecturers	Male	1384
	Female	204
	Total:	1588
Number of Graduates	Male	1864
	Female	0
	Total:	1864
Number of Scholarships	**13 for Undergraduates only**	

Source: Ministry of Higher Education

It can be seen in [Table 9], that in 2002 there were no private universities in the whole country and zero female students in the public universities. The reason for zero students in the universities was because of the Taliban regime as, during this regime, females were not allowed to go to schools and universities. However, following the end of their regime there was a significant increase in the number of female students in school and universities. As well, it can be seen that the number of scholarships in 2002 were just 13, which were just for undergraduate students. The reason was that Afghanistan didn't have relationships with the world universities or enough of a budget for higher education; however, the main reason was

15 http://www.baag.org.uk/sites/www.baag.org.uk/files/resources/attachments/WB%20Afghan%20Higher%20Education%202013.pdf

the Taliban regime. The next table illustrates the Number of Universities, Number of Students, Number of Lecturers, Number of Graduates and Number of Scholarships in 2012.

[Table 10]: Higher Education data in 2012

Year 2012			
Number of Universities	Governmental	31	
	Private	82	
	Total	**113**	
Number of Students	Governmental	Male	98000
		Female	27000
		Total:	**125000**
	Private	Male	42000
		Female	28000
		Total:	**70000**
Number of Lecturers	Male	3033	
	Female	522	
	Total:	**3555**	
	Private	Around 2000	
Number of Graduates	Male	10542	
	Female	2944	
	Total:	**13486**	
Number of Scholarships	Undergraduates	6630	
	Masters	1309	
	Doctoral	65	
	Total:	**8004**	

Source: Ministry of Higher Education

In [Table 10], it can be seen that number of public universities increased from 16 to 31 and private universities from zero to 82 which shows that during the last ten years there has been a huge increase in the higher education and indicates that a large investment in private universities has taken place. Also, we can see an enormous increase in the number of students, both male and female. The reason for this increase in the number of female students is that, after the Taliban regime, females were allowed to join the universities and the government and development partners supported them in joining and taking part in the country reconstruction and development. During those last ten years the development partners provided 2% of aid from the whole aid, which although a small percentage, is still

important because, as was said in the beginning, higher education is one of the top three priorities for Afghanistan National Development Strategy (ANDS). This means the government budget increased for higher education over the last ten years, as well as there being a specific budget for government scholarships. In [Table 10], we can see an enormous increase in the number of scholarships, including government scholarships, which are provided by the Afghanistan government and also scholarships provided by development partners. The scholarships are in three categories: Undergraduates, Masters and Doctorial. From the conclusion of the analysis and discussion it can be said that the foreign aid assistance and increase in the human capital and education level in the whole country has led to there being more students and graduates and therefore it will now be possible to create more graduate jobs in the country; whereas before there were very few. More jobs will bring more money into the economy and lead to more consumerism, which we can sum up in one sentence - that people's living standards have increased and they have better level of income than before and that, therefore, the country's Gross Domestic Product (GDP) also increased accordingly.

4.3.2 The Amount of Transportation money verses Foreign aid

For writing this topic, information from a report of 'Afghan Roads Reconstruction Deconstruction of Lucrative Assistance[16], 2007' was used. This says Ring roads and National roads, which means roads that connect the capital with the other provinces, and their rebuilding is the second absorber of foreign aid after security costs from 2002 until now. This can be described, due to the high importance that was given to the rebuilding of roads, as a facilitator for economic development, security improvements and more precisely, combination of isolated parts of the country.

[Table 11]: Aids for Road Projects by Provinces since 2002-2007

NO.	Provinces	Amount
1	Balkh	85 599 USD
2	Ghazni	15 248 511 USD

16

file:///D:/second%20year%20university%20data/My%20Thesis%20data/Private%20sector/Afghan%20Roads%20Case%20Study.pdf

3	Helmand	3 308 548 USD
4	Herat	186 534 USD
5	Kabul	30 997 244 USD
6	Kandahar	11 348 614 USD
7	Kunar	20 561 192 USD
8	Nangarhar	11 943 432 USD
9	Paktia	3 148 669 USD
10	Paktika	45 670 849 USD

Source: Ministry of Finance of Afghanistan

In [Table 11], we illustrates the top 10 provinces which receives the highest amount of foreign aids.

Construction of roads was not easy for the contractors during those years and had its difficulties. The main conflicts for the reconstructing of roads are security and corruption.

1. Security, has been always the major issue for rebuilding the infrastructure of the country and that is why more than 50%, of foreign aid during the last decade was spent in security. During the three decades of civil war, almost 75% of the country's roads and high ways were destroyed completely. After the Taliban regime, the development partners gave priority to the construction of roads, because it was important for the foreign troops to transfer their vehicles and machinery to the whole country and connect provinces with the capital city. The expenses of providing security for constructing the roads can be represented by up to 15% of the total cost of each road construction project. For example, one of the main reasons for the massive cost of building the Kabul-Kandahar road was due to security risks control. In order to reach this aim, it seems that security firms and road contractors had to pay indigenous commanders and warlords to guarantee short-term security along the road building sites. These unaccounted operations fed straight into the Afghan comparable illegal economy. Some of the road reconstruction projects were delayed or cancelled because

of the security issues, such as kidnaping of workers and engineers from the construction sites by warlords to gain some money for them or by the Taliban in order to exchange Taliban prisoners for workers and engineers. Some of the roads were destroyed after reconstruction by the Taliban by bombing the foreign troops' vehicles.

2. Corruption: For writing this topic, information from a report of the Federal Ministry for Economic Cooperation and Development of Germany[17] 'Fighting Corruption in the Road Transport Sector, ' was used. The report says the world bank considers corruption among the major difficulties for economic and social development. Corruption prevents investments and delays development. It causes inequality and destroys the country's macroeconomic system and financial stability. In Afghanistan, corruption infiltrates all sectors and this lack of openness in financial dealings can lead to a reduction in the amount of foreign aid. In 2010, the president of the country assigned a special committee to reduce the corruption in government offices all around the country. After four years fighting with corruption, Afghanistan is still one of the three leading countries in terms of corruption in the world. One of the major types of corruption in the transport sector in Afghanistan is sub-contracting and bribing the government officials to win the bidding of a project. Sub-contracting causes a lot of conflicts, such as a huge change in the final cost of the project, using low quality materials, low skilled workers and machinery by the final contractor. The reason for using low quality materials and low skilled workers by final contractor is that, one project can be sub-contracted more than five times, which reduces the amount of benefit for the final contractor and that is why the final contractor uses low quality materials and low skilled workers to gain some profit from the project. From the conclusion of the analysis and discussion, it can be said the relationship between Foreign aid and the Amount of Transportation money model doesn't make sense and means that Foreign aid was not so effective in rebuilding the roads of the country during the last ten years. Furthermore, it didn't help the residence of the country to travel easily around the country without any problems because poor security on the

[17] file:///D:/second%20year%20university%20data/My%20Thesis%20data/Private%20sector/td10corruption_en.pdf

highways led to the public being robbed or scared of losing their life by the Taliban attackers.

4.3.3 Number of Doctors in Public Hospitals verses Foreign aid

For writing this topic, information from a report of the Ministry of Public Health of Afghanistan[18] 'A Basic Package of Health Service for Afghanistan, 2010' was used. This report says that, after the creation of the Islamic Transitional Government of Afghanistan in 2002, there were created fourteen public health projects within the new government's National Development agenda. The first version of the Basic Package of Health Service was started in March 2003 with the support of Development Partners and NGOs to provide primary health care facilities within the country. The first revision of the Basic Package of Health Service was completed in 2005. After completing the first Basic Package of Health Service, the Ministry of Public Health of Afghanistan and Development Partners developed a strategy to consolidate services from 2005 until 2009. Within these years, the Basic Package of Health Service was not only effective in reaching the aim in terms of availability, coverage and quality of health care, but, also, in the fact that the total package has had an incredible effect on the overall health care in Afghanistan. During those years, also, the Number of Doctors in the Public Hospitals increased, which we will show in [Table 12].

[Table 12]: Number of Doctors in Public Hospitals 2008-2011

Number of Doctors in Public Hospitals			
Provinces	**2008-09**	**2009-10**	**2010-11**
Kabul	1519	2074	2298
Nangarhar	314	377	374
Ghazni	139	171	144
Paktika	37	43	87
Paktya	116	123	120
Kunar	38	72	85
Balkh	335	352	392
Kandahar	102	168	206
Helmand	55	71	71
Heart	279	287	321

Source : Ministry of Public Health

[18] http://saluteinternazionale.info/wp-content/uploads/2011/01/Basic_Pack_Afghan_2010.pdf

[Table 12], illustrates the top ten provinces, which received the highest amount of foreign aid and the Number of Doctors in Public Hospital in each province. As can be seen from [Table 12], the Number of Doctors in Public Hospitals increased year by year, which shows that the health care in Afghanistan was getting better and that the public had better access to health care. From the conclusion of the analysis and discussion, it can be said that the relationship between Foreign aid and the Number of Doctors is positive and the model has sense. This means that foreign aid helped and increased the health care system in the country, as well as effecting the lives of the public in getting better health care access during these periods of time.

5 Conclusion

This thesis is focused on foreign aid and its effect on the life of the public from 2002 until 2012 in Afghanistan. The aims of this thesis were to show the relationships among variables and the dependence on Foreign Aid at the National level and Provincial level, and, also, to show whether or not foreign aid has helped the public to increase their general living standards.

The thesis looked at the ten top provinces that received the highest amount of aid and analysis was made to show the relationships between Foreign Aid verses the Number of Doctors in public Hospitals, the Amount of Transportation Money and the Number of Public and Private universities in the following provinces: Balkh, Ghazni, Heart, Helmand, Kabul, Kandahar, Kunar, Nangarhar, Paktika and Paktya.

This bachelor thesis was divided into separated parts. The first part describes the theoretical background and way of gaining necessary information and also explains the most important words, which are important for understanding the whole concept of the thesis. It includes historical information about foreign aid, political information and economical information about the country. The second part defines the methodology of this thesis, which is the quantitative research method and explains the methods which were used in the practical part. The last part of this thesis describes the practical part,, which is the analysis of simple linear regression and normality test done in the STATSITCA software by using the data provided and the models were interpreted to give the final result of the thesis.

It can be concluded, after analysis and interpretation of the models, that three of the models have sense and the fourth one doesn't have sense. The three models with sense show that the Number of Doctors in Public Hospitals and the Number of Public and Private universities have a strong relationship with Foreign Aid. This means that, from 2002 until 2012, foreign aid helped and improved the life of the public on a national level and a provincial level and increased their general living standards.

The fourth model is the Amount of Transportation Money and it can be seen quite clearly that it has a weak relationship with Foreign aid. This means that, from 2002 until 2012, foreign aid was not so effective in this sector due to the identified reasons of: security challenges, corruption in the government offices and sub-contracting the projects.

Overall, it can be said that foreign aid was clearly a major driving force in the improvement of the lives of the general public in Afghanistan.

Key words: Simple linear regression, Number of Doctors in Public Hospitals, Amount of Transportation Money, Number of Public and Private Universities

Anotace

Tato práce se zaměřuje na finanční pomoc ze zahraničí a její dopady na veřejný život v Afghánistánu v letech 2002 až 2012. Cílem této práce bylo provedení analýzy této pomoci a určení odlišností a vzájemných vztahů jak na úrovni národní, tak i na úrovní jednotlivých provincií. Práce měla ukázat, na základě vybraných parametrů, do jaké míry zahraniční pomoc pomohla veřejnosti zlepšit své základní životní podmínky.

Práce se zabývá těmi provinciemi, které obdržely největší částku z dané finanční pomoci, a analýza měla ukázat souvislosti zahraniční pomoci vzhledem k počtu doktorů ve veřejných nemocnicích, celkovou výši peněz investovaných do dopravní infrastruktury a počet veřejných i soukromých univerzit v následujících provinciích: Balkh, Ghazni, Heart, Helmand, Kabul, Kandahar, Kunar, Nangarhar, Paktika a Paktya.

Tato bakalářská práce byla rozdělena do několika částí. První část popisuje teoretické pozadí i zdroje nezbytných informací pro provedení analýzy a stejně tak objasňuje nejdůležitější výrazy, které jsou důležité pro pochopení celého konceptu této práce. Také obsahuje historické informace o zahraniční pomoci a politické a ekonomické informace o Afganistánu. Druhá část definuje metodologii této práce, popisuje použité kvantitativní výzkumné metoda, a vysvětluje jejich konkrétní použití v části praktické.

Poslední částí práce část praktická, ve které je pro analýzu dat použita jednoduchá lineární regrese a test normality provedený vsoftwaru STATISTICA. Pomocí těchto metod a vytvořených modelů byla získaná data interpretována a byly formulovány závěry práce.

Po analýze a interpretaci se dá usoudit, že tři modely dávaly smysl a čtvrtý nikoli. Ty tři smysluplné modely ukázaly, že počet doktorů ve veřejných nemocnicích a počet veřejných i soukromých univerzit mají silnou souvislost se zahraniční pomocí. Z toho vyplývá, že mezi lety 2002 až 2012 zahraniční pomoc pomohla a zdokonalila veřejný život na národní i provinční úrovni a rovněž zlepšila základní životní podmínky.

Čtvrtý model je obnos převedených peněz, a je poměrně zřetelné, že to má slabou souvislost se zahraniční pomocí. To znamená, že v letech 2002 až 2012 nebyla zahraniční pomoc v tomto odvětví až tak efektivní, a díky poznaným důvodům to je kvůli korupci na vládní úrovni, bezpečnostním výzvám a přehodnocování projektů.

Tak jako tak se dá říci, že zahraniční pomoc byla jasně hlavní tažnou silou zdokonalování veřejného života v Afghánistánu.

Klíčová slova: jednoduchá lineární regrese, počet doktorů ve veřejných nemocnicích, celková výše peněz investovaných do dopravní infrastruktury, počet veřejných a ´ soukromý ch univerzit

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